DRAFT
Meeting Minutes
Noname-DEFT Flex Ops Team
August 24, 1998
10:00am to 1:00pm

Participants
Mike Fris, Pete Chadwick, Jim White, Elise Holland, BJ Miller, Dave Fullerton, Art Hinojosa, Dave Briggs, Ed Winkler, Terry Erlewine, George Barns, Mark Cowin, Gary Bardini, Peter Louie (phone), Mike Ford (phone)

Purpose of Team
The ND flex Ops team was formed to evaluate nontraditional approaches to operations that would provide the flexibility to enhance the environment and water supply on a near- and long-term basis.

Ground Rules at Meetings
1. Can discuss anything without agreeing with it
2. Want to improve the environment
3. Want to improve water supply
4. Want to share water
5. Need different approaches to environment and supply operations
6. Focus on actions that reduces uncertainty
7. Use adaptive management to resolve uncertainty

Dave Fullerton's Draft Proposal on Export Operations
The team reviewed Dave Fullerton's draft proposal on using a combination of a set of predetermined and real-time operation rules and monitoring to operate the projects. Would be based on operational pumping rights for supply and environment and would have a credit system that would allow curtailment of pumping at sensitive environmental times and enhanced pumping at others. Rules could be hydrologically, biologically and/or water quality based and beneficiaries would be compensated for taking risk.("Export Operations, A Draft Proposal, Dave Fullerton, May 15, 1998."). Several examples on how the environment and water supply could use this type of flexible operations to better manage risk in meeting their objectives.

Manage Risk
Proposals were discussed that would focus on rules that would provide the most certainty of success. Such as actions that reduce direct mortality (unscreened diversions, harvest, illegal fishing, etc.). For the more uncertain rules such as E/I ratio adaptive management and monitoring to adjust. In both cases provide as much flexibility as possible.

Start with the Accord

Suggested that team start with the Accord as the base and add flexibility. What are the impediments and how do we improve it? Need to determine what can technically be achieve and what would be the institutional framework to achieve it.

Forecasting fish densities and pumping

Discussed work by Peter Louie and others on using fish density function curves developed for Tracy and Skinner to enhance water supply and reduce mortality at pumps. Developed curves from historical records for smelt, salmon, and splittail. Using triggers such as the slope, level, and duration of the density curve for a particular species, was able operate to holding the exports the same as historical and reduce mortality by 50 to 80% at the pumps. Holding the mortality the same as historical was able to increase exports in the range of 20%. Peter will review his work with the group at the next N-D flex Ops meeting on Wednesday.